UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,158	12/11/2001	Dale Ray	CE04833N	6121

23330   7590   10/18/2006

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EXAMINER
AHMED, SALMAN

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/015,158	RAY, DALE
	Examiner	Art Unit
	Salman Ahmed	2666

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *6/21/2006(Appeal Brief)*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-9,11-18,20-26,28-33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-6,8,9,11-13,15-18,20-22,24-26,28-30,32 and 33* is/are rejected.

7)☒ Claim(s) *7,14,23 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

In view of the APPEAL BRIEF filed on 6/21/2006, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Applicant has cancelled claims 3, 10, 19 and 27.

Claims 1, 2, 4-9, 11-18, 20-26 and 28-33 remain pending.

Claims 1,2,4-6,8,9,11-13,15-18,20-22,24-26,28-30,32 and 33 are rejected

Claims 7,14, 23 and 31 are objected.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 4, 17, 24, 26 and 32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Schober et al. (US PAT 6493320), hereinafter referred to as

Schober, in view of Snay et al. (US PAT 6282678, hereinafter Snay).

In regards to claims 1, 4, 17 and 26 Schober teaches in a communication system

(figure 1 element 100), wherein a controller (figure 1, element 105b or 105a) and a

communication resource or controlled device (figure 1, element 105b or 105a) are in

communication via a communication link (figure 1 element 110a), a method for enabling

a communication resource reset, the method comprising: providing a physical layer

element (figure 2A element 207a) within the communication resource, the physical layer

element being operatively coupled to the communication link; monitoring (column 10

lines 22-23, the link control unit 205b (FIG. 2B) monitors 620 the receiver 365b) a link

parameter (column 2 line 54, the transmission speed of a signal across the link) via the physical layer element (column 10 lines 22-23, receiver 365b), the link parameter being associated with the communication link; and restoring the communication resource to an initial state (column 6 lines 40-46, the sequence 400 begins with an initialization procedure 405) in response to a trigger event so that the controller is operable to reestablish communication and (column 7 lines 48-49, communication is then established 435 between tuning systems 200a and 200b (via link control units 205a and 205b)) with the communication resource, the trigger event (column 6 lines 40-46, An event that triggers the start of the link initialization) being associated with the link parameter (column 6 lines 40-46, the sequence 400 begins with an initialization procedure 405. In the initialization procedure 405, the link control units 205a and 205b (FIGS. 2A and 2B, respectively) are reset 410 (FIG. 3). An event that triggers the start of the link initialization and tuning sequence 400 may only be seen by one end of a link. Such an event may, for example, be a router hardware reset or a link error occurrence. and (column 7 lines 48-49) communication is then established 435 between tuning systems 200a and 200b (via link control units 205a and 205b)).

In regards to claims 1, 17 and 26 Schober does not explicitly teach the link parameter is associated with an Ethernet link.

Snay in the same field of endeavor teaches (column 3 lines 49-51 and lines 55-59) depending on the application, the data communication devices to be tested are routers, repeaters, bridges, concentrators, and/or cable modems. Data communication interfaces 160 are used to transfer data among the data communication devices 111,

112, 113. These data interfaces 160 are often referred to as local area network (LAN) interfaces. Typical LAN interfaces are Ethernet, FDDI, and HSSI.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schober's method by incorporating the concept of Ethernet communication link between routers as taught by Snay. The motivation is that Ethernet is widely used protocol for connecting data communication devices as suggested by Snay (column 3 lines 49-51 and lines 55-59). Due to it's robustness and high bandwidth, Ethernet is a very efficient protocol used to connect routers.

In regards to claims 17 and 26 Schober teaches a processor (figure 2A element 220a). In regards to claims 17 and 26 Schober teaches a first logic or physical layer element that directs the logic circuit to communicate with a physical layer element within the communication resource, the physical layer element being operatively coupled to the communication link (figure 2A, elements 210a and 250a). In regards to claims 17 and 26 Schober teaches a second logic or reset element that directs the logic circuit to monitor a link parameter via a physical layer element, the link parameter associated with the communication link (column 10 lines 22-23, the link control unit 205b (FIG. 2B) monitors 620 the receiver 365b)). In regards to claims 17 and 26 Schober teaches a third logic or reset element that directs the logic circuit to restore the communication resource to an initial state in response to a trigger event so that the controller is operable to reestablish communication with the communication resource, wherein the trigger event is associated with the link parameter (column 6 lines 45-55, CLK1 (which is the receive clock for the tuning system 200b at the opposite end of the link 110a).

The loss of the receive clock forces the link control unit 205b (of tuning system 200b) to also re-start the initialization and tuning sequence 400. As a result, both link control units 205a and 205b (FIGS. 2A and 2B, respectively) become synchronized in starting initialization and tuning procedure 400).

In regards to claims 24 and 32, Schober teaches the logic circuit comprising an application specific integrated circuit (column 1 lines 29-34, components that are used for forming links include, for example, integrated circuits, packaging for integrated circuits, printed circuit boards, connectors, cables, drivers, receivers, and other components).

3.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al. (US PAT 4180708), hereinafter referred to as Yamaguchi, in view of Hunzinger (US PAT 6564062) and Silverman (US PAT 6731649).

In regards to claim 9, Yamaguchi teaches in a wireless communication system (figure 1), the communication system providing communication service to a plurality of mobile stations (column 2, line 29), wherein a base station controller (figure 1, a control station 4) and a base station (figure 1, a base station 3) are in communication via a communication link (Figure 1, The respective base stations 3 are connected to the control station 4 through wire transmission lines 5), and wherein the base station is operable to enable a reset (column 5 lines 25-27, the operation of the base station is restarted), the base station comprising: a processor (figure 3, counter 511); a physical layer element (figure 2, level detector 9) operatively coupled to the processor and the communication link (figure 2, reference numeral 6 designates a signal input terminal

from a wire transmission line); a reset element (figure 2, Fault detector 10) operatively

coupled to the processor and the physical layer clement, the reset element being

operable to monitor a link parameter associated with the communication link via the

physical layer element (column 3 lines 33-42, The fault detection at the fault detector 10

is achieved by a method based on the fact that either one of the abovementioned

frequencies is always fed to the input terminal 6 enabling the interruption of both these

frequencies to be detected, or by a method in which a waveform having any regularity is

employed as the waveform of the control signal from the control station, while

monitoring the output signal from the level converted 8 with the fault detector 10,

enabling non-fulfillment of the above regularity to be detected), and the reset dement

being operable to restore the base station to an initial state in response to a trigger

event (column 5 lines 20-26, logic "1") so that the base station controller is operable to

reestablish communication with the base station, wherein the trigger event is associated

with the link parameter (column 5 lines 20-26, If a logic "1" is emitted at any one of the

outputs of the detectors 100, 400 and 500, then the flip-flop 611 of the memory circuit

600 is set, resulting in an output "0" at its output terminal 13, which interrupts the

operation of the radio transmitter 9. After the fault has been recovered, a pulse in

applied to the reset terminal 14 to reset the flip-flop 611 and then the operation of the

base station is restarted).

Yamaguchi does not explicitly teach counter being a processor.

Hunzinger in the same field of endeavor teaches implementing a counter in a

processor (column 4 line 15, counter in a processor).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yamaguchi's system with implementing counter in a processor as taught by Hunzinger. The motivation is that, a processor used for counter is more robust and flexible in term of its usage.

Yamaguchi and Hunzinger do not explicitly teach the link parameter is associated with an Ethernet link.

Silverman in the same field of endeavor teaches connectivity between the base stations (BTSs), base station controllers (BSCs) being Gigabit Ethernet (column 14 lines 55-64).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yamaguchi and Hunzinger's method by incorporating the concept of Ethernet communication link as taught by Silverman. The motivation is that (as taught by Silverman, column 14 lines 13-15 and 55-64) when a wireless, laser or optical alternative becomes available then the CLEC can easily take advantage of the fact that IP works with any link layer protocol, including Ethernet and SONET. With the introduction of QoS in Gigabit Ethernet networks and the availability of TDMoIP, IP is very seriously considered as the preferred solution.

4.   Claims 2 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schober in view of Snay, in view of Menon et al. (US H2079), hereinafter referred to as Menon..

In regards to claims 2 and 18 Schober and Snay teach, apparatus and method for automatically initializing link which is associated with Ethernet to achieve improved link performance as described in the rejections of claims 1, 17 and 26 above.

In regards to claims 2 and 18 Schober and Snay do not explicitly teach the reset occurring system (router) being a base station.

Menon in the same field of endeavor teaches routers being base stations (column 4 lines 35-39, Wireless router 14 may comprise any suitable device operable to route data packets in system 10. Wireless router 14 may, for example, comprise a base station, a base station controller coupled to the base station, and a router coupled to the base station or the base station controller).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schober and Snay's teaching by incorporating the steps of routers being base stations as suggested by Menon. The motivation is that by integrating base station and routing capability in one system one can reduce the maintenance cost for organizations thus creating economic benefit for the organizations.

5.   Claims 8, 16, 25 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schober in view of Snay, in view of Grilli et al. (US PAT PUB 2004/0032836), hereinafter referred to as Grilli.

In regards to claims 8, 16, 25 and 33 Schober and Snay teach, apparatus and method for automatically initializing link which is associated with Ethernet to achieve improved link performance as described in the rejections of claims 1, 17 and 26 above.

Schober and Snay do not explicitly teach of the system being CDMA, TDMA compliant.

Grilli in the same field of endeavor teaches (page 1 section 0005) the systems may be based on code division multiple access (CDMA), time division multiple access (TDMA), or some other multiple access techniques

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schober and Snay's teaching by incorporating Grilli 's teaching of the systems being based on code division multiple access (CDMA), time division multiple access (TDMA), or some other multiple access techniques. The motivation is that (as suggested by Grilli, page 1 section 0005) wireless communication systems are widely deployed to provide various types of communication including voice and packet data services. TDMA and CDMA are the two widely used systems besides GSM. As such, it would be economically beneficial to support these two systems in order to gain more customer base.

6.   Claims 11, 12, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi, Hunzinger and Silverman as applied to claim 9 above and further in view of Kondylis et al. (US PAT 6665311), hereinafter referred to as Kondylis.

In regards to claims 11, 12, 13 and 15 Yamaguchi, Hunzinger and Silverman teach apparatus and method for automatically initializing link to achieve improved link performance as described in the rejections of claim 9 above.

In regards to claims 11, 12 and 13, Yamaguchi, Hunzinger and Silverman do not explicitly teach a trigger event is a decrease in link speed associated with the communication link for a time period.

Kondylis teaches traffic fluctuation can be used a trigger event (column 6 lines 39-42, the technique of continuously monitoring the input traffic rate so that it can increase or decrease the reserved bandwidth based on traffic fluctuations (trigger)).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yamaguchi, Hunzinger and Silverman's teaching by incorporating the concept of monitoring rate to trigger an event as taught by Kondylis. The motivation is that (as suggested by Kondylis, column 6 lines 39-47) such technique of continuously monitoring the input traffic rate provides the ability to increase or decrease the reserved bandwidth based on traffic fluctuations (trigger) thus providing strict quality of service (QoS) guarantees. Rate fluctuation is a viable trigger event that can be used efficiently.

In regards to claim 15, Schober teaches the logic circuit comprises an application specific integrated circuit (column 1 lines 29-34, components that are used for forming links include, for example, integrated circuits, packaging for integrated circuits, printed circuit boards, connectors, cables, drivers, receivers, and other components).

7.   Claims 5, 6, 20-22, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schober and Snay as applied to claims 1, 17 and 26 above and further in view of Kondylis

In regards to claims 5, 6, 20-22, 28-30 Schober and Snay teach, apparatus and method for automatically initializing link to achieve improved link performance as described in the rejections of claims 1, 17 and 26 above.

Schober and Snay do not explicitly teach a trigger event is a decrease in link speed associated with the communication link for a time period.

Kondylis teaches traffic fluctuation can be used a trigger event (column 6 lines 39-42, the technique of continuously monitoring the input traffic rate so that it can increase or decrease the reserved bandwidth based on traffic fluctuations (trigger)).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schober and Snay's teaching by incorporating the concept of monitoring rate to trigger an event as taught by Kondylis. The motivation is that (as suggested by Kondylis, column 6 lines 39-47) such technique of continuously monitoring the input traffic rate provides the ability to increase or decrease the reserved bandwidth based on traffic fluctuations (trigger) thus providing strict quality of service (QoS) guarantees. Rate fluctuation is a viable trigger event that can be used efficiently.

Allowable Subject Matter

8.   Claims 7, 14, 23 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9.   Applicant's arguments with respect to the claims have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Salman Ahmed whose telephone number is (571)272-

8307. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system.   Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit 2616

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10/5/2006

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